

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A fluorine-containing vinyl ether represented by the formula 1,



wherein R represents an organic group comprising at least one fluorine atom and a cyclic structure.

2. (Original) A fluorine-containing vinyl ether according to claim 1, wherein the organic group comprises:

(a) the cyclic structure that is selected from the group consisting of cyclopentane ring, cyclohexane ring, norbornene ring, aromatic rings, tricyclodecane ring; and

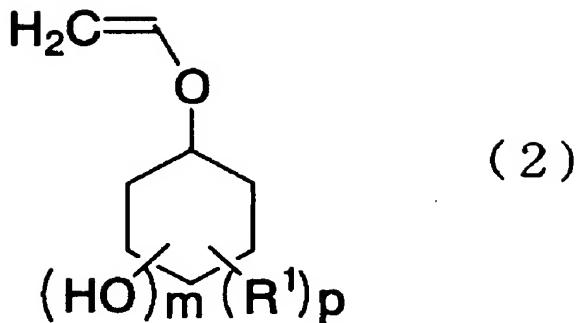
(b) at least one substituent that is selected from the group consisting of  $(-\text{OH})_m$ ,  $(-\text{R}^1)_n$ , and  $-\text{COOR}^4$

where  $\text{R}^1$  is at least one substituent selected from the group consisting of  $-\text{F}$ ,  $-\text{CF}_3$ , and  $-\text{R}^2\text{C}(\text{CF}_3)_2\text{OR}^3$ , where  $\text{R}^2$  is  $\text{CH}_2$  or  $\text{C}_2\text{H}_4$ , and  $\text{R}^3$  is H or an acid-labile protecting group,

$\text{R}^4$  is H, a  $\text{C}_1\text{-C}_{15}$  alkyl group, or a  $\text{C}_1\text{-C}_{15}$  substituent containing an ether bond, and

$m$  is 0 or 1, and  $n$  is an integer of 1-8.

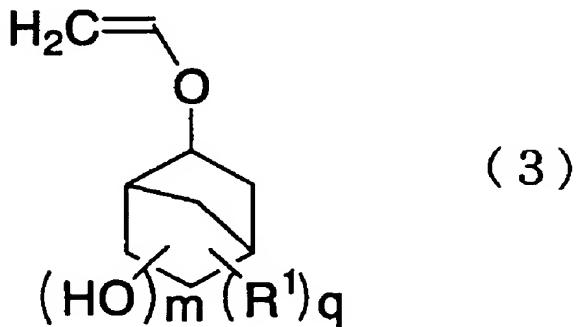
3. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by the formula 2,



where  $R^1$  is at least one substituent selected from the group consisting of  $-F$ ,  $-CF_3$ , and  $-R^2C(CF_3)_2OR^3$ , where  $R^2$  is  $CH_2$  or  $C_2H_4$ , and  $R^3$  is H or an acid-labile protecting group, and

$p$  is an integer of 1-5, and  $m$  is 0 or 1.

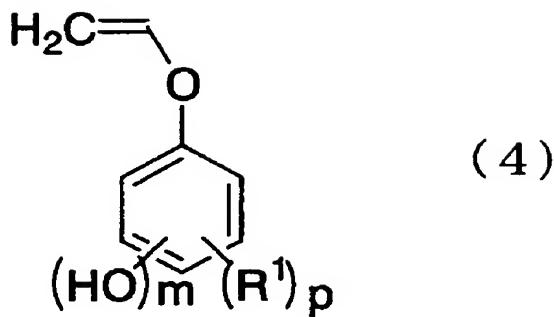
4. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by the formula 3,



where  $R^1$  is at least one substituent selected from the group consisting of  $-F$ ,  $-CF_3$ , and  $-R^2C(CF_3)_2OR^3$ , where  $R^2$  is  $CH_2$  or  $C_2H_4$ , and  $R^3$  is H or an acid-labile protecting group, and

$q$  is an integer of 1-4, and  $m$  is 0 or 1.

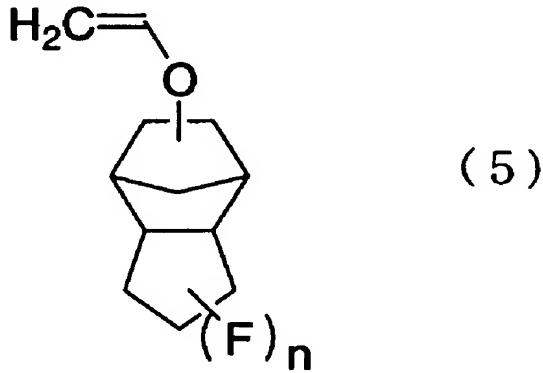
5. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by the formula 4,



where  $R^1$  is at least one substituent selected from the group consisting of –F, –CF<sub>3</sub>, and –R<sup>2</sup>C(CF<sub>3</sub>)<sub>2</sub>OR<sup>3</sup>, where R<sup>2</sup> is CH<sub>2</sub> or C<sub>2</sub>H<sub>4</sub>, and R<sup>3</sup> is H or an acid-labile protecting group, and

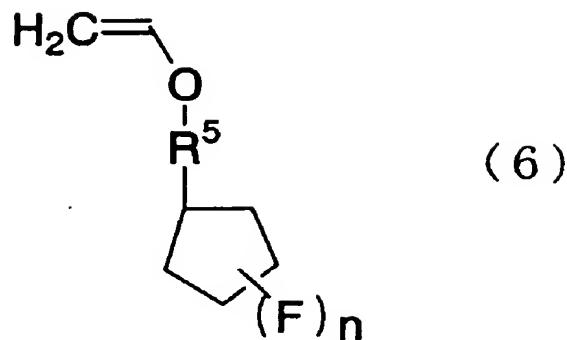
p is an integer of 1-5, and m is 0 or 1.

6. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by the formula 5,



where n is an integer of 1-8.

7. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by the formula 6,

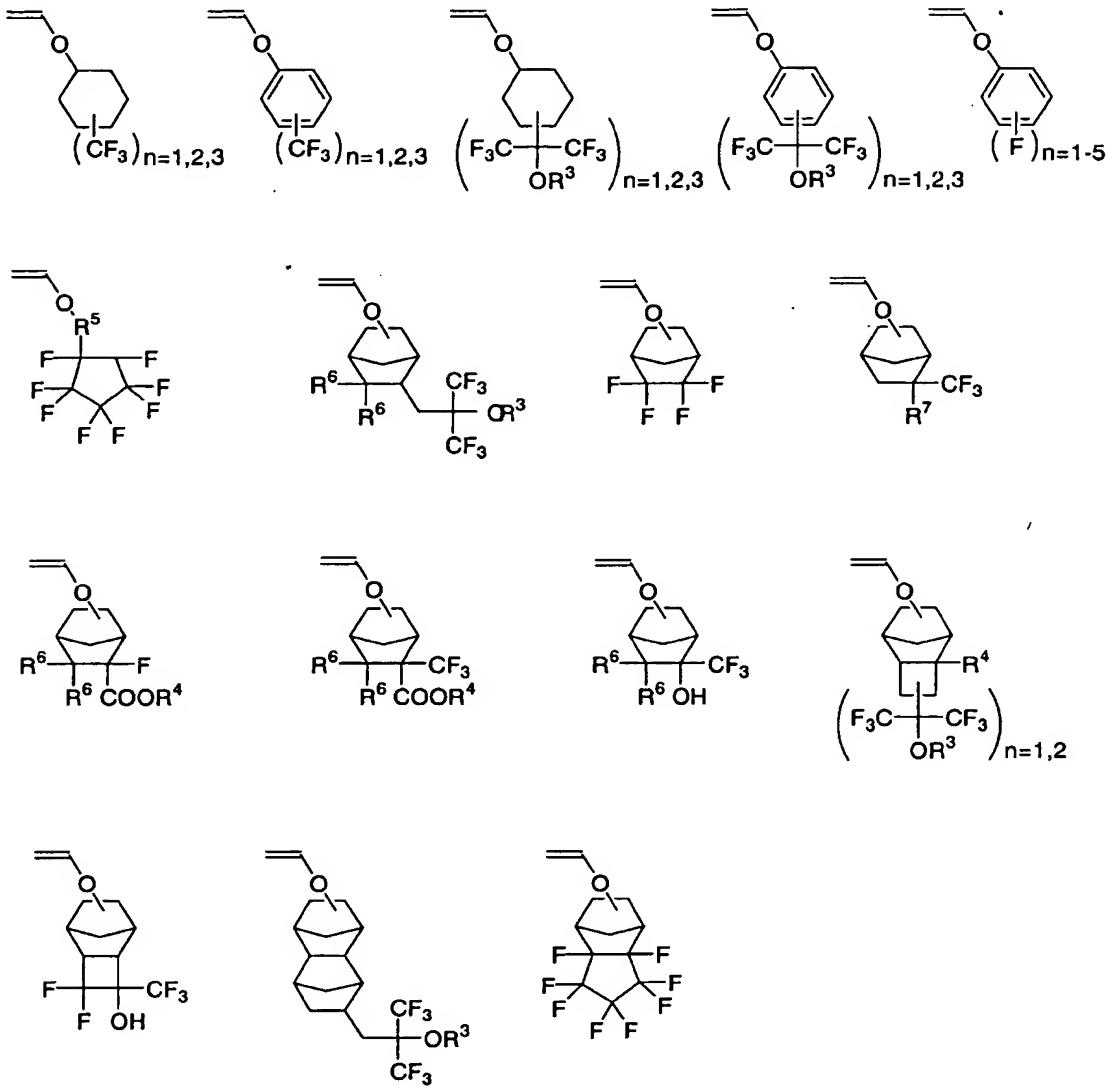


where  $\text{R}^5$  is a  $\text{C}_0\text{-C}_5$  alkyl group, and  $n$  is an integer of 1-8.

8. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which comprises a hexafluoroisopropanol unit represented by the formula 7,



9. (Currently Amended) A fluorine-containing vinyl ether according to claim 1 or 2, which is represented by one of the following formulas:



where  $R^3$  is H or an acid-labile protecting group;

$R^4$  is H, a  $C_1$ - $C_{15}$  alkyl group, or a  $C_1$ - $C_{15}$  substituent having an ether bond;

$R^5$  is a  $C_0$ - $C_5$  alkyl group;

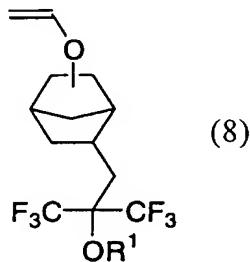
$R^6$  is H or F; and

$R^7$  is  $CF_3$ , OH,  $CO_2H$ ,  $CO_2R^8$ , or  $OCOR^8$  where  $R^8$  is  $C_1$ - $C_{15}$  alkyl group.

10. (Currently Amended) A fluorine-containing polymer comprising a unit derived from a fluorine-containing vinyl ether according to claim 1 or 2.

11. (Original) A resist composition comprising a fluorine-containing polymer according to claim 10.

12. (Original) A fluorine-containing copolymer comprising:  
a first unit derived from a first monomer that is a fluorine-containing vinyl ether represented by the formula 8:

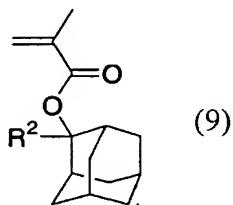


where R<sup>1</sup> is -H or a C<sub>1</sub>-C<sub>8</sub> alkyl group that optionally contains an oxygen atom; and

a second unit derived from a second monomer that is at least one selected from the group consisting of acrylic esters and methacrylic esters.

13. (Original) A fluorine-containing copolymer according to claim 12, wherein the second monomer contains an acid-labile protecting group.

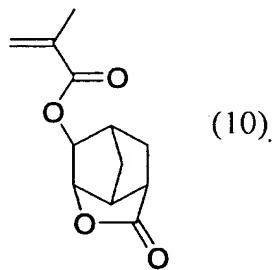
14. (Currently Amended) A fluorine-containing copolymer according to claim 12 or ~~13~~, wherein the second monomer is a first methacrylic ester represented by the general formula 9:



where R<sup>2</sup> is -CH<sub>3</sub> or -CH<sub>2</sub>CH<sub>3</sub>.

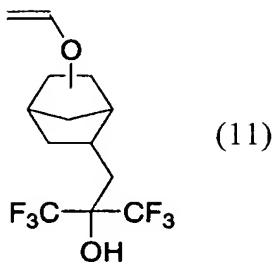
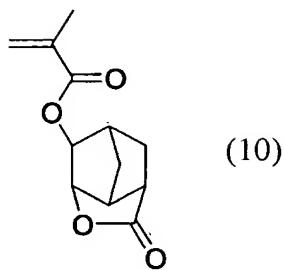
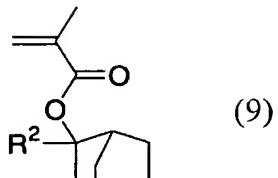
15. (Original) A fluorine-containing copolymer according to claim 12, wherein the second monomer is an acrylic or methacrylic ester comprising a lactone ring.

16. (Currently Amended) A fluorine-containing copolymer according to claim 12 or ~~15~~, wherein the second monomer is a second methacrylic ester represented by the formula 10:



17. (Original) A fluorine-containing copolymer according to claim 12, wherein the second monomer is a combination of first and second methacrylic esters represented by the formulas 9 and 10, and

wherein the fluorine-containing vinyl ether is represented by the formula 11,



where R<sup>2</sup> is -CH<sub>3</sub> or -CH<sub>2</sub>CH<sub>3</sub>.

18. (Currently Amended) A resist composition comprising a fluorine-containing copolymer according to claim 12 or 13.